

Appl. No. 10/508,924
Amdt. Dated October 5, 2007
Reply to Final Office Action of August 29, 2007

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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1. - 8. (Cancelled)

9. (Previously Presented) A nonvolatile magnetic memory device of the type having:

a first wiring;
a second wiring intersecting three-dimensionally with said first wiring; and
a tunnel magnetoresistance element which is electrically insulated from
said first wiring and electrically connected to said second wiring and which is
formed in the region of intersection of said first wiring and said second wiring
such that a tunnel insulating layer is sandwiched between ferromagnetic
materials which change in resistance depending on whether the spin direction is
parallel or antiparallel, thereby recording information; wherein

said magnetic memory device comprises a magnetic flux concentrator of
high-permeability layer formed between said first wiring and said tunnel
magnetoresistance element and adjacent the lateral sides of said tunnel
magnetoresistance element, with an insulating film interposed therebetween.

10. (Previously Presented) A nonvolatile magnetic memory device of the type having:

a first wiring;
a second wiring intersecting three-dimensionally with said first wiring; and
a tunnel magnetoresistance element which is electrically insulated from
said first wiring and electrically connected to said second wiring and which is
formed in the region of intersection of said first wiring and said second wiring
such that a tunnel insulating layer is sandwiched between ferromagnetic
materials which change in resistance depending on whether the spin direction is
parallel or antiparallel, thereby recording information; wherein

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said magnetic memory device comprises a first magnetic flux concentrator of high-permeability layer formed at least adjacent both of the lateral sides of said first wiring and on the side of said first wiring which is opposite to the side facing said tunnel magnetoresistance element, and a second magnetic flux concentrator of high-permeability layer formed between said first wiring and said tunnel magnetoresistance element and adjacent the lateral sides of said tunnel magnetoresistance element, with an insulating film interposed therebetween.

11. (Original) The magnetic memory device as defined in Claim 10, wherein an insulating film is formed between the first magnetic flux concentrator and the first wiring.

12. (Previously Presented) The magnetic memory device as defined in Claim 8 9, wherein at least either of the high-permeability layers formed on the lateral sides of the first wiring projects beyond the first wiring and toward the tunnel magnetoresistance element.

13. (Original) The magnetic memory device as defined in Claim 12, wherein an insulating film is formed between the first magnetic flux concentrator and the first wiring.

Claims 14. – 40. (Canceled)